

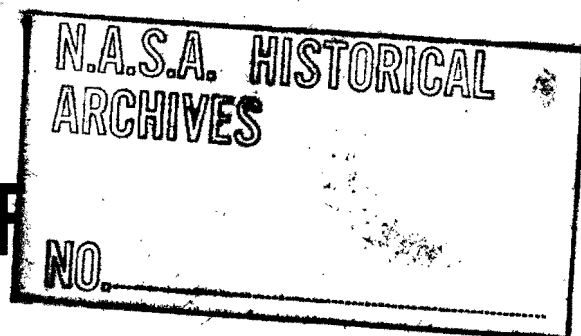
Schedule of Physical
Evidence



REPORT OF APOLLO 204 REVIEW BOARD

TO
THE ADMINISTRATOR
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

APPENDIX F



APOLLO SPACECRAFT

The spacecraft (S/C) consists of a launch escape system (LES) assembly, command module (C/M), service module (S/M), and the spacecraft/lunar module adapter (SLA). The LES assembly provides the means for rapidly separating the C/M from the S/M during pad or suborbital aborts. The C/M forms the spacecraft control center, contains necessary automatic and manual equipment to control and monitor the spacecraft systems, and contains the required equipment for safety and comfort of the crew. The S/M is a cylindrical structure located between the C/M and the SLA. It contains the propulsion systems for attitude and velocity change maneuvers. Most of the consumables used in the mission are stored in the S/M. The SLA is a truncated cone which connects the S/M to the launch vehicle. It also provides the space wherein the lunar module (L/M) is carried on lunar missions.

TEST IN PROGRESS AT TIME OF ACCIDENT

Spacecraft 012 was undergoing a "Plugs Out Integrated Test" at the time of the accident on January 27, 1967. Operational Checkout Procedure, designated OCP FO-K-0021-1 applied to this test. Within this report this procedure is often referred to as OCP-0021.

TESTS AND ANALYSES

Results of tests and analyses not complete at the time of publication of this report will be contained in Appendix G, Addenda and Corrigenda.

CONVERSION OF TIME

Throughout this report, time is stated in Greenwich Mean Time (GMT). To convert GMT to Eastern Standard Time (EST), subtract 17 hours. For example, 23:31 GMT converted is 6:31 p.m. EST.

APPENDIX F
SCHEDULE OF PHYSICAL EVIDENCE

APPENDIX F

PREFACE

Immediately following the Apollo 204 accident of January 27, 1967, all associated equipment and material were impounded. Release of this equipment and material for normal use was under the close control of the Apollo 204 Review Board. Apollo Review Board Administrative Procedure No. 11, February 11, 1967, established the Apollo 204 Review Board Material Release Record (MRR). This MRR was the official form used to release material from full impoundment and was valid only after being approved by the Board and signed by a Member. The form was used as the authority to place any impounded item into one of the three Categories defined in Administrative Procedure No. 11. This appendix contains all of the authorized MRR's. Each item submitted on an MRR was given a control number; a description, including the part number and serial number; the relevance and location to the accident; any constraints before release; and the control category. The categories placed on the equipment were as follows:

Category A - Items which may have a significant influence or bearing on the results or findings of the Apollo 204 Review Board.

Category B - All material other than Category A which is considered relevant to the Apollo 204 Review Board investigation.

Category C - Material released from Board jurisdiction.

Several classes of equipment were released by special Board action prior to the establishment of the MRR system. The operating procedure for release of these classes is Enclosure F-1 to this appendix.

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0001	White Room Door	None Loc: White Room	None	A	C	Approved 2/15/67
0002	Flow sensor set (RCS) P/N G-16-858170-201 S/N 7 Log #135 PIRR #252 (kit for RCS plugs) to measure gas flow	None Loc: A8 +Z+Y	None	A	C	Approved 2/15/67
0003	LC antenna coupler set ME481-0050-0001 Log #132 PIRR #257 (empty box) (equip out at Pad)	None Loc: A8 +Z+Y	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0004	SCS Breakout Box X00-002 S/N FF-001 Log #133 PIRR #254 (was not used on this test)	None A-8 -Z -Y	None	A	C	Approved 2/15/67)
0005	Flow Adapter Set (RCS) P/N G16-824499 S/N 3 Log #134 PIRR #253 (Empty) Plugs in S/C	None Loc: Level A8 +Z+Y	None	A	C	Approved 2/15/67
0006	Module Leak Test Unit S14-079 Log #255 PIRR #384 (and attached hoses)	None Loc: White Room	Hold TPS GSO 79-3-018 generated to run analysis pending results - then release	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0007	Box of A.C. Extension Cords Log #105 PIRR #235 Cannot be plugged into S/C	None Loc: Level A8 +Z+Y	None	A	C	Approved 2/15/67
0008	Differential Voltmeter J. Fluke Model 803B S/N 1365 Log #221 PIRR #344	None Loc: Level 8-Z-Y under Q.C. Desk OCP 0005	None	A	C	Approved 2/15/67
0009	Decade Resistor (Biddle-Gray) S/N 31837 used with scope	None Loc: Level A8 Inside Cabinet at +Z OCP 0005	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0010	Power Supply (Hewlett Packard) P/N NASA LOC-AMR #39602 S/N 310-18470 Used with scope for trouble shooting	None Loc: Level A8 in cabinet at +Z	None	A	C	Approved 2/15/67
0011	Oscilloscope P/N Tektronix - 321 S/N 002906	None Loc: Cabinet A8-1	None	A	C	Approved 2/15/67
0012	PIB (Area 15) Brush recorder P/N RD2522-20 (No S/N)	None Loc: Level A8 In cabinet at +Z Used in OCP 0005	None	A	C	Approved 2/15/67
0013	Audio Oscillator LOC-AMR-43855 S/N 331-03345	None Loc: Cabinet A8-1	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESR. CATEGORY	BOARD ACTION
0014	CD Milliammeter (HP Clip-on) NASA LOC #AMR 43018 S/N 131-01808	None Loc: Cabinet A8-1 Used in OCP 0005	None	A	C	Approved 2/15/67
0015	Test Set (?) (Shallcross) #6100 S/N 32956	None Loc: Cabinet A8-1	None	A	C	Approved 2/15/67
0016	VTVM Model 410C NASA Property S/N F329730	None Loc: Cabinet A8-1	None	A	C	Approved 2/15/67
0017	Simpson Meter Model Z69 S/N Z13869	None Loc: Cabinet -A8-1	Perform functional & release	A	C	Approved 2/15/67
0018	L&N Test Set P/N 5300 S/N 1644965	None Loc: Cabinet A8-1	None	A	C	Approved 2/15/67
0019	Bag of test leads Log No:	None Loc: Cabinet -A8-1	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0020	Bag of connector covers	None Loc: Cabinet -A8-1	None	A	C	Approved 2/15/67
0021	Bracket antenna Coupling Set P/N ME481-0050-0001	None Loc: Cabinet -A8-1	None	A	C	Approved 2/15/67
0022	Heat Gun Model #751-CD S/N 725277	None Loc: Cabinet -A8-1	None	A	C	Approved 2/15/67
0023	Weber Temp Check P/N 38611 S/N Z00446 (PIB Area Cab #7)	None Loc: Cabinet -A8-1	None	A	C	Approved 2/15/67
0024	Hard Hat 2 ea. Log #217 PIRR 334	None Loc: 1 ea. Bottom left corner of cabinet A8-1 1 ea. bottom left corner of NASA QC Desk	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0025	Bolts NAS 1153-C9 (PIB Area Cab. #7)	None Loc: Cabinet A8-1	None	A	C	Approved 2/15/67
0026	Head Set Log #154 PIRR 287 S/N 170A	None Loc: Cabinet A-8+Z	None	A	C	Approved 2/15/67
0027	Blower 1 ea. Log #112 PIRR #242 S/N 100330 Brought up after fire to exhaust smoke	None Loc: Level 8A+Y+Z	None	A	C	Approved 2/15/67
0028	Water Cooler 1 ea. Log #148 PIRR #259	None Loc: Level 8+Z+Y	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0029	Lock out box (2 ea.) Z00-065 TE 459 S/N FF002 FF003 (PIB Area Cab. #7)	None Loc: In Cabinet on A8 (Cabinet #A8-1)	None	A	C	Approved 2/15/67
0030	Tool box, personal Mr. J.A. Walters Log #222 PIRR #347 Locked time unknown	None Loc: Removed from swing arm	Inventory and release to owner	A	C	Approved 2/15/67
0031	Cardboard box - clean room clothing Log #129 PIRR #243	None Loc: Front of A8-1 cabinet +Y+Z Axis	Used - hold Clean -- release	A	C	Approved 2/15/67
0032	Headsets (2 ea.) Log #81 PIRR #123 S/N A6039 & A6044	None Loc: Removed from White Room	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0033	Monkey Bar, GSE Ingress egress assist Log #82 PIRR #128	None Loc: White Room	Visual inspection & release	A	C	Approved 2/15/67
0034	Tool pouch Log #98 PIRR #198	None	Record the contents Release to Owner	A	C	Approved 2/15/67
0035	Kit, Optical Align S/N 233913 Log: #127 PIRR #248 (empty)	None Loc: Level A8 -Z-Y Axis	Visual Inspection	A	C	Approved 2/15/67
0036	Gas Mask Log #89 PIRR #133	None Loc: White Room	Insp. for functional use, examine canister contents from used gas masks, check for functional use and analyze. This work to be accomplished under cognizance of Norris Gray. Release upon approval of Panel 11 & 13.	A	C	Approved 2/16/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0037	3 ea. cardboard Boxes containing used gas masks. Log #107 108 109 PIRR #230 229 231	None Loc: Level A8 - +2+Z+Y	Same as previous 0036.	A	C	Approved 2/16/67
0038	Gas Mask 4 ea. Log #117 118 (2 each) 119 PIRR #236 238 234 S/N 7-1321 7-1326 7-139 7-1069	None Loc: 2 ea. under NAA Q.C. Desk - Y Axis 1 ea level A-8 +Y 1 ea under swing arm Step +Y-Z Axis	Same as previous 0036			Approved 2/16/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0039	Face Portion Gas Mask 2 ea. Log #115 116 PIRR #237 239	None Loc: Swing arm entrance to White Room and under -Y corner of White Room	Same as previous 0036			Approved 2/16/67
0040	Spares for water glycol and oxygen servicing Ground Support Equipment. A14-033 S14-019 S14-053 S14-119* S14-121** S14-125 S14-140 *Not used to service water/glycol, only potable water. **Water/glycol primary loop, does not inter-face with spacecraft.	None Loc: Impounded to support the investigation of the Apollo 204 accident. These components were in storage at the time of, or procured since, the accident and are required as replacements for failed items on GSE being used to continue operations in support of AS 501, 502 & 206.	None	A	C	Approved 2/15/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0041	GSE Cable P/N SCH-105026 S/N-1	None Loc: Bonded Locker 2440 MSOB	None	B	C	Approved 2/16/67
	GSE Cable P/N SCA-105027 S/N-1	None Loc: Bonded Locker 2440 MSOB	None	B	C	Approved 2/16/67
	Chamber-to-Power Supply Adapter P/N SCA-105028 S/N-1	None Loc: Bonded Locker 2440 MSOB	None	B	C	Approved 2/16/67
	Torso Harness P/N 103120E S/N 61	Same type as Astronauts were wearing. Bonded Locker 2440 MSOB	None	B	C	Approved 2/16/67
0042	Physio-Simulator P/N SOB 105007 S/N 004	Used in past S/C testing prior to OCP-K-0021-1 Loc: Bonded Locker 2440 MSOB	None	B	C	Approved 2/16/67
	CWG Adapter P/N SCA 105020 S/N 1	None Loc: Bonded Locker 2440 MSOB	None	B	C	Approved 2/15/67
	Lightweight headset P/N A2013-000 S/N 102 or 103	Used in past S/C testing Loc: NAA GFE Crib MSOB	Unknown	B	C	Approved 2/16/67
	Li OH Canisters P/N ME 901-0218-0001 (2 each)	These canisters are of the same type that were installed in S/C 012 during OCP-K-0021.	Approved TPS for analysis and approval of Panel 5 and 18.	A	C	Approved 2/16/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0043	Fire Hood 1 ea. Log #114 PIRR #241 Left by Firemen	None Loc: Level A8- +Y+Z	Return to Norris Gray upon approval of Panel 13.	A	C	Approved 2/16/67
0044	Mobile Press Unit Assy. (Nitrogen "K" bottle and cart). Log #277 PIRR #415 S/N 2	None Loc: Level A-7	Sample analysis and release upon approval of Panel 18.	A	C	Approved 2/16/67
0045	Fire extinguishers (16 ea.) 15 lb. CO ₂ (1 ea.) Dry Chem (20 ea.) 50 lb. CO ₂ (Cart mounted) 16 ea. 15 lb. CO ₂ Log # PIRR # 95 214 96 218 96 219 94 213 94 209 93 202 93 204 94 208	None Loc: Levels A7 and A8, LC 34 S/N # G-129200 H-513994 H-656271 K-382116 None K-699689 K-700304 K-381892	Fire Dept. to report status of each extinguisher and run functional, and release upon approval of Panel 11 & 13.	A	C	Approved 2/16/67
(Cont.).						

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0045 (Cont.)	Log # PIRR # 93 205 93 203 93 206 93 207 95 216 95 212 227 346 228 345 1 ea. Dry Chem. 94 211 2 ea. 50 lb. CO ₂ 95 215 94 210 Condition: All Fire Ext. used.	S/N # K-380859 K-380976 None None H-657852 None J-853959 K-381100 None None None				
0046	O ₂ Analyzer P/N 52E180113-3 2 ea. S/N 3 & 4 Log # 289,290 PIRR #109, 108 (2 not used) K bottle was used Hold for more inf.	None (1) Outside w/r A-8 S/N 4 (2) 02 panel inside w/r S/N 3	TPS S/C 012-007 and release by Panel 18.	A	C	Approved 2/16/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0047	Trash Cans 7 ea. Log #91 and 239 PIRR #197, 195, 199, 196, 220, 200, 372	None Removed from levels 5,6,7 and 8	Examine contents in presence of fire panel. Store residue. Ship container to pad.	A	C	Approved 2/16/67
0048	Box - Gask Mask Log #104 PIRR 233	None Loc: Level A-8 +Y	Same as previous 0036	A	C	Approved 2/16/67
0049	Foot lockers 2 ea. - normal purpose of these lockers is for pad storage of crew systems equip. Log #130 & 128 PIRR #249 & 246 GFE Equipment carriers. Not used in test.	None Loc: -Z	Visual inspection inventory contents, release upon approval of Panel 13.	A	C	Approved 2/15/67
0050	Trash Cans 3 ea. Log #75, 79, 74 PIRR #186, 201, 185	None Loc: 1 ea. -Y 1 ea. level 7 +Z+Y	Examine contents in presence of fire panel and other interested personnel, store residue and return container to pad.	A	C	

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0051	Gas Mask Box #16 Log #111 PIRR #228	None Loc: Level A-8-Y+Z	Same as previous 0036	A	C	Approved 2/16/67
0052	Gas Mask Box #18 Log #110 PIRR #232	None Loc: Level A-8-Y+Z	Same as previous 0036	A	C	Approved 2/16/67
0053	S14-091 S/N 3 Battery Conditioner S14-111 S/N 4 S14-111 S/N 5 Battery Charger Constant Voltage SK818-0019 FQ 0502 (Battery Test Unit) SK818-2012 FQ 0503 (Load Box) TAIR Book #FF0731 & All TAIR Books for above units	Located in Battery Room Bldg. M505. These units were used to charge S/C 012 batteries for OCP 0006 & OCP 0021 and are needed to support the continued operations in support of AS 501, 502 & 206. Insp. book for battery shop maintenance.				Approved 2/16/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0054	Gas Mask Box (seal broken) Log #223 PIRR #347 S/N 13A	None Loc: - Removed from Swing Arm	Same as previous 0036			Approved 2/16/67
0055	Boots, Protective Log #84 PIRR #136 (Booties)	None Loc: White Room	Inventory: Approval required by Panel 13.	A	C	Approved 2/16/67
0056	ECU O ₂ Flow-rate Transducer (1 each) (AiResearch P/N 836112-2-2-1)	Same type of units were installed in ECU on S/C 012. (Located in bonded storage in MSOB)	This Transducer will be utilized to determine different failure mode characteristics.	A	C	Approved 2/17/67
0057	ACE Carry-on Uplink C14-264-3 C14-265-3 DTCS C14-266-3	1. Used in "Plugs In" Test 2. Disconnected but in the area for "Plugs Out" Test. 3. Location A8 Level	1. No Constraints 2. Necessary to support S/C 017 Testing. 3. Needed One Week Prior to re-stacking S/C 017 at VAB	A	C	Approved 2/16/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0058	ACE Carry-on Downlink C14-203-10 } Racks C14-204-10 } C14-210-4 } PCM Unit C14-211-12 } C14-212-12 } Signal C14-213-11 } Conditioners C14-574-10 } Cable Set W0215 } PCM Cable	1. Used in "Plugs In" Test 2. Disconnected but in the area for "Plugs Out" Test 3. Location A8 Level	1. No Constraints 2. The uncontrolled environment at LC34 - A8 Level is detrimental to the equipment. This equipment is necessary for use on future S/C.	A	C	Approved 2/16/67
0059	Tee Adapter P/N V16-601396	Not in Spacecraft 012 at time of accident. Similar configuration.	None	A	C	Approved 2/18/67
0060	Cobra Cable P/N V16-601263-41	Not in Spacecraft 012 at time of accident. Similar configuration.	None	A	C	Approved 2/18/67
0061	Noise Limiter P/N V16-601549	Not in Spacecraft 012 at time of accident. Similar configuration.	None	A	C	Approved 2/18/67
0062	PGA Adapter P/N V16-601357-31	Not in Spacecraft 012 at time of accident. Similar configuration.	None	A	C	Approved 2/18/67
0063	Torso Harness P/N 103120E, S/N 69	Not in Spacecraft 012 at time of accident. Similar configuration	Special test to be performed in accordance with RST 3A.	A	C	Approved 2/18/67
0064	Communications GSE Adapter P/N SCA-105029, S/N 1	Not attached to Spacecraft 012 at time of accident. Similar configuration.	Special test to be performed in accordance with RST 3A.	A	C	Approved 2/18/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0065	GSE Power and Distribution Cable P/N SCC-105024, S/N 1	Not attached to Spacecraft 012 at time of accident. Similar configuration.	Special test to be performed in accordance with RST 3A.	A	C	Approved 2/18/67
0066	Mobile Test Rack P/N SCC-100137, S/N 2	Not attached to Spacecraft 012 at time of accident. Similar configuration.	Special test to be performed in accordance with RST 3A.	A	C	Approved 2/18/67
0067	Interconnect Box P/N 688541-1F, S/N HS-GSE-003, and Headset.	Not attached to Spacecraft 012 at time of accident. Similar configuration.	Special test to be performed in accordance with RST 3A.	A	C	Approved 2/18/67
0068	Light Weight Headset P/N A2013-000, S/N 102 or 103.	Not attached to Spacecraft 012 at time of accident. Similar configuration.	Special test to be performed in accordance with RST 3A.	A	C	Approved 2/18/67
0069	A14-037 S/N-7 Adapter and Duct Set	Used on S/C 012 to supply C/M circulating air and was physically connected prior to hatch closeout. Needed urgently to support S/C 017 operations.				Approved 2/21/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0070	C14-209-4 Spacecraft External Mounting Rack	<ol style="list-style-type: none"> 1. Used during "Plugs In" test. 2. Disconnect but in the area for "Plugs Out" test 3. Location A8 Level 	<ol style="list-style-type: none"> 1. No constraints. 2. Necessary to support S/C 017 testing. 3. The uncontrolled environment at LC 34 A8 Level is detrimental to the equipment stored in this rack. The equipment has been reasigned to Category "C". 	A	C	Approved 2/21/67
0071	C14-206-1 Spacecraft External Mounting Rack	<ol style="list-style-type: none"> 1. Used during "Plugs In" test. 2. Disconnect but in the area for "Plugs Out" test. 3. Location A8 Level. 	<ol style="list-style-type: none"> 1. No constraints. 2. Necessary to support S/C 017 testing. 3. The uncontrolled environment at LC 34 A8 Level is detrimental to the equipment stored in this rack. The equipment has been reasigned to Category "C". 	A	C	Approved 2/21/67
0072	Log Books from Unified S-Band Station: <ol style="list-style-type: none"> 1. M & O Log 2. Apollo Displays Log 3. Recorders Log 4. GCC Log 5. Tel Track Log 6. Launch Support Log 	Used at time of accident and located at station.	None - Obtain copies of pages in use for OCP 0021 then release.	A	C	Approved 2/21/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESR. CATEGORY	BOARD ACTION
0073	Mechanic's Tool Box (SEHORN)	None known. Located on South side of Level A-7, Pad 34	Inspect and record contents	A	C	Approved 2/22/67
0074	Seven hard hats	None Located on East side of Level A-7, Pad 34	None	A	C	Approved 2/22/67
0075	50 Volt DC Power Supply	Was to have been used during 0021 test to hold ECS coolant valves open after flyaway umbilical release. Located on East side of Level A-7, Pad 34.	Perform functional check. Have electrical systems engineers determine that power supply could not have caused the problem.	A	C	Approved 2/22/67
0076	Mechanic's Tool Bag	None known. Located on East side of Level A-7, Pad 34.	Inspect and record contents.	A	C	Approved 2/22/67
0077	Three Gas Masks	On hand for emergency use. Located on Northeast side of Level A-7, Pad 34.	Inspect and evaluate func- tionally by Norris Gray, KSC -- Return to stock	A	C	Approved 2/22/67
0078	SSMT OCP Book	In use by technician on Northeast side of Level A-7, Pad 34.	Turn whole book to Panel 6.	A	A	Approved 2/22/67
0079	Mechanic's Tool Box (Williams)	None known. Located on Southwest side of Level A-6, Pad 34.	Inspect and record contents	A	C	Approved 2/22/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0080	Two Hard Hats	No relation Located on South side of Level A-6, Pad 34.	None	A	C	Approved 2/22/67
0081	Mechanic's Tool Box (Fairman)	None known. Located on West side of Level A-6, Pad 34.	Inspect and record contents.	A	C	Approved 2/22/67
0082	Volt ohm - milliammeter	None - not connected. Located on West side of Level A-6, Pad 34.	None	A	C	Approved 2/22/67
0083	Vacuum Pump and Bell Jar	No relation - used to mix potting compounds. Located on North side of Level A-6, Pad 34.	None	A	C	Approved 2/22/67
0084	SSMT OCP Book	In use by technician on Southwest side of Level A-6, Pad 34	Turn whole book to Panel 6	A	C	Approved 2/22/67
0085	Special Clothing for entering the White Room	No relation. Located on Southwest side of Level A-6, Pad 34. Probably not in use at time of accident.	Inspect, document any unexpected conditions - release if none found.	A	C	Approved 2/22/67
0086	Five battery-operated lanterns.	No relation. Used after fire started.	None - units functioned properly.	A	C	Approved 2/22/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0087	L and Line 1TV185 1TV176 1TV186 1TV177 1TV187 1TV178 1TV184 1TV077 1TV190 1TV188 1TV191 1TV189 2DAC-004 thru 2DAC-015 2DAC-229 2DAC-230	From LC34 to MSOB ACE S/C Rm. 3436	Lines required to support other testing.	A	C	Approved 2/22/67
0088	Z-00692 J Fluke Diff. VM. 803B S/N L57873	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0089	Z-00697 HP Audio Osc. 201C S/N L41167	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0090	Z-01173 HP Audio Osc. 201C S/N L43852	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0091	Z-01346 HP Pwr. Sup. 4301A S/N L63518	On standby in S.E. trailers	None	A	C	Approved 2/22/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0092	Z-00341 Tektronic Sq. Wave Gen. 105	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0093	Z-00932 Brush Recorder RD2522 S/N L 41025	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0094	Z-00364 Tek. Plug In H S/N L 54895	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0095	Z-00980 Tek. Plug In 1A1 S/N L 45419	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0096	Z-00765 Simpson VOM 270	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0097	Z-00762 Simpson VOM 270	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0098	Z-00350 Simpson VOM 270 S/N L 41120	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0099	Z-00759 Simpson VOM 270	On standby in S.E. trailers	None	A	C	Approved 2/22/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0100	Z-00758 Simpson VOM 270	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0101	Z-00728 Simpson VOM 270	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0102	Z-00178 Simpson VOM 270 S/N L41118	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0103	Z-00175 Simpson VOM 270 S/N L41114	On standby in S.E. trailers	None	A	C	Approved 2/22/67
0104	All spacecraft spare bulk items located in D/810, Material and Supply Support, Warehouse.	Impounded to support the investigation. These components were in storage at the time of, or procured since the accident and will be used to support S/C 017 operations, as required.				Approved 2/23/67
0105	S14-121-9 Water/Glycol Refrigeration Unit G14-845000	Utilized on S/C 012 during OCP 0006 & 0021. Located at Base of Tower Task #3 Item.	Required for LC-39 Site Activation. Required 2/24/67.	A	C	Approved 2/23/67
0106	S14-019R-8 Water/Glycol Service Set ME901-0092-0002	Utilized on S/C 012 during OCP 0006 & 0021. Located at Base of Tower Task #3 Item.	Required for LC-39 Site Activation. Required 2/24/67.	A	C	Approved 2/23/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0107	Pyrotechnics initiator substitute unit. G16-820402 A14-139-65 A14-139-66 A14-139-67 A14-139-68 A14-139-69 A14-139-70 A14-139-71 A14-139-72 A14-139-73 A14-139-74 A14-139-75 A14-139-76 A14-139-77 A14-139-78	Used during "Plugs In". Disconnected, but remained in area during "Plugs Out" Level A7 & A8.	1. Necessary to support S/C 017 testing. 2. Required by 3/1/67.	A	C	Approved 2/23/67
0108	A14-275-1 RCS Quad Simulator	Used during "Plugs In." Disconnected, but remained in area A7 during "Plugs Out".	Necessary to support S/C 017 testing. Required by 3/7/67	A	C	Approved 2/23/67
0109	C14-480-5 Initiators Stimuli Unit G16-850650	Used during "Plugs In." Disconnected, but remained in area A8 during "Plugs Out."	Necessary to support S/C 017 testing. Required by 3/1/67.	A	C	Approved 2/23/67
0110	C14-451-5 Earth Landing System Sequence Controller Pressure Stimuli Generator. G14-854726	Was powered up during "Plugs In" & "Plugs Out," but not utilized. Located at Level A8.	Necessary to support S/C 017 testing. Required by 3/7/67.	A	C	Approved 2/23/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0111	3 ea. GSE Physio Simulators - P/N SCB 105007 PIRR - 244	Not used during 0021 Located in suitcase on Southeast side of Level 8A, Pad 34.	None 1 ea. has been sent to MSOB per TPS S/C 012 MA 014. 2 ea. presently located in PIB.	A	C	Approved 2/23/67
0112	3 ea. GSE Physio Simulator Adapter Cables - P/N 105018-A PIRR - 244	Not used during 0021. Located in suitcase on Southeast side of 8A Level, Pad 34.	None	A	C	Approved 2/23/67
0113	Empty. 2 ea. Suitcases (Color Charcoal) PIRR - 244	Used only to transport equipment to Pad. One located on Southeast side of 8A Level, Pad 34.	None	A	C	Approved 2/23/67
0114	1 ea. DSEA Recorder GSE Check Out Fixture with Storage Box S/N 104 PIRR - 249	Used to transport DSEA Recorder to Pad. Located on Southwest side of Level 8A, Pad 34.	None	A	C	Approved 2/23/67
0115	T. V. Camera Box Log #178 PIRR #322 (Empty)	LOC: Cabinet A8-1 Camera Onboard S/C	None	A	C	Approved 2/23/67
0116	Support Bracket P/N DTT 101161-13 Log #185 PIRR #329	LOC: Cabinet A8-1 GSE - Not Installed	None	A	C	Approved 2/23/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0117	S/C Window Cover (2 each) P/N MK394-10061-021 Log #191 PIRR #331	LOC: Cabinet A8-1 GSE - Not Installed	None	A	C	Approved 2/23/67
0118	Window Cover GSE 3 each MK 394-1001-032 MK 394-10061-31 MK 394-10061-017 Log #246, 247, 248 PIRR #380,381,382	A-8 in Cabinet Not Installed During Test	None	A	C	Approved 2/23/67
0119	Oscilloscope TechTronic 555 S/N 008004 with Scope Camera C-13 SN 006452, and Type L Plug-In Unit S/N 016499 Log #122 PIRR #255	LOC: Level A8 + Z -Y Used OCP 0005	None	A	C	Approved 2/23/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0120	Power Supply S/N 4020 Log #125 PIRR #255	LOC: LEVEL A-8 +Z+Y AXIS Was a stand by unit	None	A	C	Approved 2/23/67
0121	Box of Body Shrouds Log #226 PIRR #343 (Plastic Bags) Not used by medical people	LOC: Removed from Level A-8 in front of C-14-451	None	A	C	Approved 2/23/67
0122	Box - RCS Nozzle Plugs w/flow sensor Log #218 PIRR #323	LOC: Cabinet A8-1 GSE Not Installed	None	A	C	Approved 2/23/67
0123	Launch Complex 34 - All areas below adjustable Level 5, not to include spacecraft GSE.	As Noted	Walk down of all levels involved.	A	C	Approved 2/24/67
0124	Tool Bag (Mechanics)	N.W. corner of tower Level A-7 (Relevance to Accident - NONE)	Inspect contents, record each item in inventory form, and release to owner.	A	C	Approved 2/24/67
0125	C14-385-3 Test Set ACE	Used to check out C14-231 per IDR-026 during OCP-K-0006	Unit has been released for use at VAB per Investigation TPS GC 385-3-004	A	C	Approved 2/24/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0126	One (1) Belt Type Tool Kit with the following tools: (Personal - Givens) A. Screw Driver - 8 in. Common B. Screw Driver - 14 in. Common (2 each) C. Pair of Side Cutters D. Pair of Water Pump Pliers E. 8 in. Crescent Wrench F. Screw Driver - 6 in. Reed & Fringe G. Open End-Box wrench H. Small roll of black plastic tape	LOC: On 220' Level during the accident, now in the PIB.	None	A	C	Approved 2/28/67
0127	Pressure Test Stand Z00-025-401 FF001 FF0803	Utilized during 0021 in LC 34 White Room (Used to reduce the pressure between the K bottle and S/M entrance) not located in white room - located in S.E. corner of 8A level of service structure.)	None Has been sampled per TPS-013. TPS complete and no unusual amount of contaminants were found. Analysis has been in the hands of Panel 16 for several days.	A	C	Approved 3/1/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0128	The entire voice Operational Intercomm System (OIS) used for the AS-204 Plugs Out Test, except the following items not to be released. 1. Launch Complex 34 OIS 2. Launch Complex "CAST" Panel 3. Umbilical Communications Link	The Operational Intercomm System (OIS) has been thoroughly documented by the Voice Communications Group of Panel 9 as to configuration (submitted to Panel 1), performance, and tests simulating the "plugs-out" configuration. These circuits are urgently needed to support other areas and to proceed with modifications to Launch Complex 39 communications.	None	A	C	Approved 3/1/67
0129	S14-099-3 Protective Pressure Unit G14-848540	Utilized to Maintain Pressure on SPS Tanks. S/M Required for S/M 012 Investigation Effort.	None	A	C	Approved 3/1/67
0130	(1) ea. mirror personal (L. D. Reece)	Log Card 225 LC-34 White Room	None	A	C	Approved 3-1-67
0131	(1) length of 12 gage (approx.) 18 ft.	Log Card 225 LC-34 White Room	None	A	C	Approved 3-1-67
0132	(1) length of single strand wire (no ID) white approx. 100 ft.	Log Card 225 LC-34 White Room	None	A	C	Approved 3-1-67
0133	Transfer Van	Used to transport astronauts from MSOB to LC-34	None	A	C	Approved 3-1-67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0134	ACE - S/C Computer Room (MSOB, 4452)	Ground Station used to conduct OCP - 0021, but specific configuration documented and submitted to 204 Review Board.	Required to provide latitude in present testing schedules.	A	C	Approved 3-1-67
0135	ACE - S/C Control Room (MSOB, 3446)	Ground Station used to conduct OCP - 0021, but specific configuration documented and submitted to 204 Review Board.	Required to provide latitude in present testing schedules.	A	C	Approved 3-1-67
0136	ACE S/C Signal Distribution Room (MSOB, 3436)	Ground Station used to conduct OCP - 0021, but specific configuration documented and submitted to 204 Review Board.	Required to provide latitude in present testing schedules.	A	C	Approved 3-1-67
0137	Spares for Ground Support Equipment A14-011 S14-120 S14-088 S14-041 A14-019	None Location: These components were in storage at the time of, or procured since, the accident and are required as replacements for failed items on GSE used to continue operations in support AS 501, 502, & 206.	None	A	C	Approved 3-1-67
0138	ME435-0013-0035 V16-714385-11 S/N 0014 Data Storage Eqpt. Tape Recorder - DSE	None Item utilized as spare. Did not see S/C 012. Required to support S/C 017.		A	C	Approved 3-2-67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0139	ME435-0026-0002 V16-714394 Flt. #8 S/N Flight Qual. Tape Recorder FQ T/R	None Item utilized as spare. Did not see S/C 012. Required to support S/C 017		A	C	Approved 3/2/67
0140	SPS Nozzle Extension	The constraints listed have been satisfied and no discrepancies were noted.	(1) Inspection (2) Nozzle removed (3) Cover Nozzle	A	C	Approved 3/2/67
0141	1 Tube DuPont PR-240 AC Lube	In Storage Cabinet on Level A-6	Identify Sample and Release upon Approval of Panel #18.	A	C	Approved 3/2/67
0142	Spacecraft LEM Adapter (SLA)	No discrepancies were noted in satisfying any of the constraints listed.	1. SM/SLA demate 2. Electrical Ringout 3. Inspection	A	C	Approved 3/4/67
	PYROS	None	None	A	C	Approved 3/4/67
0143	Gemini Suit Check-out Console P/N SE-AE-000504 S/N S-15638	None Location: Suiting White Rooms	1. Communication Checkout 2. Calibration Checkout	A	C	Approved 3/4/67
0144	Gemini Suit Check-out Console P/N SE-AE-000504 S/N S-15639	None Location: Suit White Rooms	1. Communication Checkout 2. Calibration Checkout	A	C	Approved 3/4/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0145	Spacecraft Parts Trailer containing parts for open TPS's & DR's on S/C 012	Located at LC-34-Parts in trailer were not installed on S/C 012		A	C	Approved 3/6/67
0146	Tool Box (Wingfield)	None. Located lev. A-6 LC-34	Inventory and record contents	A	C	Approved 3/4/67
0147	C14-599-1 Radio Frequency Switching Console G16-850130 Connects one of three identical transmission lines from the S/C to the radio frequency system c/o unit.	This unit currently assigned Cat. 3. Utilized during 0021. Located MSOB Seq. Lab. Room 3412. Required to support S/C 017 operations.	None	A	C	Approved 3/6/67
0148	Release LC 34 to Operational Status X00-040-1 FF 0710 SK818-0608 TM Breadboard Assy.	Utilized on S/C 012 during OCP 0006 or OCP 0021. Cat. III LC 34 Required to Support S/C 017.	TPS LC 34-577 (Investigation) removes remaining items of concern from LC 34 to PIB. Upon completion of this removal, release LC 34 to operational status.	A	C	Approved 3/6/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0149	C14-472-1 G16-85305 Provides the necessary cabling to interconnect the S/C under test, the associated GSE and the facility services at Launch Complex 34.	Utilized during OCP 0006 & OCP 0021 Located at LC 34 Required by Quality Control personnel to document existing discrepancies at Launch Complex 34.	None	A	C	Approved 3/7/67
0150	Q-Ball Part #50M12580 Serial #7 A14-056-5 ME127-0007-0002 S/M Propulsion Eng. Gimbal Locking Links	None Loc: Top of Launch Escape System None Install per OCP 0006 Installed on Service Module MSOB Required to Support S/C 012 Operation		A	C	Approved 3/7/67
0151	Spacecraft Spares Pitch Electronic Control Assy. ME901-0166-0324 S/N 10028 DAE 1020	None Units were in warehouse stock during accident. These units to be returned to vendor for mod. to be used on S/C 017		A	C	Approved 3/9/67
0152	Roll Electronic Control Assy. ME901-0167-0334 S/N 10028 EAG 1014	None Units were in warehouse stock during accident. These units to be returned to vendor for mod. To be used on S/C 017.		A	C	Approved 3/9/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0153	S/C Tool Box (Gray)	Located on Lev. A-8 Contained special tools for working on the S/C. Now in PLB	Inventory & record contents.	A	C	Approved 3/9/67
0154	S/C Tool Box (Red)	Located on Lev. A-8 Contained special tools for working on the S/C. Now in PLB	Inventory & record contents.	A	C	Approved 3/9/67
0155	Tool Kit NASA Suit Tech. A. Rochford	In the transfer van and not used.	Inventory	A	C	Approved 3/10/67
0156	Tool Kit NASA Suit Tech. W. Salyer	In the transfer van and not used.	Inventory	A	C	Approved 3/10/67
0157	Batteries from Spacecraft 011 (4) 4090-11A S/N 0886A	These batteries were in the deep freeze in the battery shop at the time of the incident.	None	A	C	Approved 3/13/67
0158	4090-11A S/N 0887A		None	A	C	Approved 3/13/67
0159	4095-3A S/N 0906A		None	A	C	Approved 3/13/67
0160	4095-3A S/N 0910A		None	A	C	Approved 3/13/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
YOO-057-1 FF 1459 DTT-101137 Cable hook-up for X99-025	Utilized on S/C 012 during OCP 0006 or OCP 0021. Cat. III LC 34 Required to Support S/C 017		A	C		
YOO-057-2 FF 1461 DTT-101137 Cable hook-up for XOO-025	Utilized on S/C 012 during OCP 0006 or OCP 0021. Cat. III LC 34 Required to Support S/C 017		A	C		
YOO-057-3 FF 1462 DTT-101137 Cable hook-up for XOO-025	Utilized on S/C 012 during OCP 0006 or OCP 0021. Cat. III LC 34 Required to Support S/C 017		A	C		
XOO-004-1 FF 0770 TE 270 EPS Battery Control Box	Utilized on S/C 012 during OCP 0006 or 0021. Cat. III LC 34 Required to Support S/C 017		A	C		
XOO-025-1 FF 0707 DTT-101133 TE 396 Battery Substitute Unit	Utilized on S/C 012 during OCP 0006 or 0021. Cat. III LC 34 Required to Support S/C 017		A	C		
YOO-085 FF 001 TE 490 EPS Cable Assy.	Cat. III was utilized during OCP 0006 or 0021 LC 34 Required to Support S/C 017 Operations.		A	C		

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0161	Servi ce Module Gen Assy V17-000002-131	No discrepancies were noted in satisfying any of the constraints listed.	1) Board approval of Panel 21 Final Report of 204 Review Board. 2) No additional testing in support of CM investigation	A	C	Approved 3/14/67
0162	Rate Gyro Assembly P/N ME-493-0005-0314 S/N 10028EAB1015	These items were stored in the warehouse or procured since. Were not installed on S/C 012. Required to support S/C 017 operation.	None	A	C	Approved 3/17/67
0163	Attitude Gyro/Accelero-meter Assembly P/N ME-493-0006-0314 S/N 10028EAC1018					
0164	Auxiliary Electronic Control Assembly P/N ME-901-0169-0314 S/N 01128EAH1017					Approved 3/17/67
0165	Displays Electronic Control Assembly P/N MF-901-0170-0334 S/N 10028DAD1019					Approved 3/17/67
0166	Gimbal Position/Attitude Set Indicator P/N ME-432-0056-0304 S/N 10028EAJ1021					Approved 3/17/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0167	A14-019 Umb. Disconnect	Connected to S/C	None	A	C	Approved 3/20/67
0168	S14-112 Scupper Set	Connected to S/C	None	A	C	Approved 3/20/67
0169	G17-828107-41 S/N 8 S/M Radiator Protective Cover Log 695	None. Sent to PIB	None	A	C	Approved 3/20/67
0170	2 ea.. LCQ - 2 Lights Log 369	Used to Work in C/M after the Accident.	None	A	C	Approved 3/20/67
0171	Nylon Sling S/N 002 LEM Handling Log 404	Borrowed to Transport C/M to PIB	None	A	C	Approved 3/20/67
0172	Hatch Closeout Tool Kit. Log 86	In White Rm. Used to Close Hatches	None	A	C	Approved 3/20/67
0173	Fiber Glass Container. (Contains V16-601356-21 Cable S/N AAG014 and CWG Helmet S/N 103) Log 92	On Tower Level	None	A	C	Approved 3/20/67
0174	Z-00924 H/P Counter	Standby Log 216	None	A	C	Approved 3/20/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0175	Z-00368 NJE Pwr. Sup.	Standby Log 215	None	A	C	Approved 3/20/67
0176	Z-00878 Webber Temp. Meter	Thermocoupler Connected to S/M Isolation Valve During Test. Log 381	None	A	C	Approved 3/20/67
0177	Z-00439 Triplet VOM	Standby Log 992	None	A	C	Approved 3/20/67
0178	Z-00683 Simpson VOM	Standby Log 992	None	A	C	Approved 3/20/67
0179	Z-01175 Simpson VOM	Standby Log 992	None	A	C	Approved 3/20/67
0180	Mod. 594 Thermograph Log 87	None. Records temp. & Humidity of C/M During Normal Work. Remove Prior to Hatch Closeout.	Remove any data and turn in to Room 3344 and release item	A	C	Approved 3/20/67
0181	BB8BB144-60G Flex Hose Log 417	None	None	A	C	Approved 3/20/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0182	Adapter Duct Part of A14 - 037 Log 380	Used to Furnish Air to C/M Prior to Closeout.	None	A	C	Approved 3/20/67
0183	5 ea. 800328 - 1 - 1 Suit Ventilators Log 260 - 262 - 263 264 - 265	Not Used	Previously sampled	A	C	Approved 3/20/67
0184	3 ea. Head Rest Pads Log 152	None. On Tower Level.	None	A	C	Approved 3/20/67
0185	G16 - 824415 Hatch Prot. Seal. S/N LAY0116 Log 416	None. Used to Protect Hatch Edges During Normal Work	None	A	C	Approved 3/20/67
0186	Velostat Covered Pads Log 146	Used as Protective Pads in C/M During Normal Work	None	A	C	Approved 3/20/67
0187	G02 K - Bottle S/N AF8837 Log 725	On Level 8	Sample and turn in results to Panel 4	A	C	Approved 3/20/67
0188	G02 K - Bottle S/N TH1833 Log 231	On Level 8 Sampled per TPS S/C 012 - S/C 013	Sample and turn in results to Panel 4	A	C	Approved 3/20/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0189	G02 K - Bottle S/N 199699 & Reg. S/N 661. Log 412	On Lev. 8	Sample and turn in results to Panel 4	A	C	Approved 3/20/67
0190	G02 K - Bottle S/N EL 17652 Log 415	On Lev. 8	Sample and turn in results to Panel 4	A	C	Approved 3/20/67
0191	2 ea. GN2 K - Bottles 1 with Reg. Log 137 and 253	On Lev. 8	Sample and turn in results to Panel 4	A	C	Approved 3/20/67
0192	2 ea. GHE K - Bottles Log 138 and 271	On Lev. 8	Sample and turn in results to Panel 4	A	C	Approved 3/20/67
0193	Engine Pneumatic Actuation Package S/N XX0057, P/N 1119600-149	None. In Apollo Warehouse. Required per TPS S/S 320.		A	C	Approved 3/20/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0194	Velostat Covered Board Log 140	None. Level 8 of Tower		A	C	Approved 3/22/67
0195	Scott Air Pack Log 106	None. Used after accident.		A	C	Approved 3/22/67
0196	Sample Bottle Log 832	None. On Tower at Time of accident.		A	C	Approved 3/22/67
0197	Box Ass'd. Items Log 992	Collected off Tower. Inventoried per TPS PI-047		A	C	Approved 3/22/67
0198	1902431-031 PSAAM Log 207	Removed from C/M Prior to Hatch Close Out.		A	C	Approved 3/22/67
0199	Trash Can Log 672	On Umb. Tower. Contents Checked by Dr. Carhart.		A	C	Approved 3/22/67

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0200	Crew Couches from S/C	None	None	A	C	
	014 (3 ea.)	Following is a listing of part numbers and quantities of equipment requested for release and subsequent shipment to: Link Group, GPI 1740A NASA Blvd. Houston, Texas, 77058 Attn: Mr. Wayne Shotwell				
	P/N	Quantity	Description			
	1. V16-531501	1	Crew couch installation complete (Perspective)	A	C	
	2. V16-601472-11	2	Pads, Back	A	C	
	3. V16-601472-81	1	Pad, back	A	C	
	4. V16-601472-92	1	RH Pad, hip and thigh	A	C	
	5. V16-601472-71	1	Center pad, hip and thigh	A	C	
	6. V16-601472-111	1	Center pad, hip and thigh	A	C	
	7. V16-601472-101	2	Pad, hip and thigh	A	C	
	8. V16-601472-91	1	LH Pad, hip and thigh	A	C	
	9. V16-601472-41	4	Pads, control arm	A	C	
	10. V16-601472-61	3	Pads, control arm	A	C	

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
	P/N	Quantity	Description			
0200	11. V16-601472-131	12	Pads, head rests	A	C	
	12. V16-601472-121	3	Pads, head rests	A	C	
	13. V16-601495	2	Cover	A	C	
	14. V16-601494	1	Cover, upper protective	A	C	
	15. V16-601496-1	1	LH cover, side protective	A	C	
	16. V16-601496-2	1	RH cover, side protective	A	C	
	17. V16-571314-31	2	Struts, Z-Z axis	A	C	
	18. V16-571412-41	1	RH Struts, X-X axis (head)	A	C	
	19. V16-571412-51	1	LH Struts, X-X axis (head)	A	C	
	20. V16-571411-41	2	Struts, X-X axis (foot)	A	C	
	21. ME 901-0257-0002	}	Harness assembly restraint, Crewman (Spec. control part)	A	C	
	22. ME 901-0257-0004			A	C	
	23. ME 901-0257-0006			A	C	

APOLLO 204 REVIEW BOARD MATERIAL RELEASE RECORD

ITEM NO.	DESCRIPTION	RELEVANCE TO ACCIDENT (INCLUDE LOCATION)	CONSTRAINT PRIOR TO RELEASE	CURR. CATEGORY	DESIR. CATEGORY	BOARD ACTION
0201	Trash, being held per MRR 0047 and 0050.	Fire panel and interested parties have checked thru the residue and find nothing relevant to the accident.		A	C	Approved 3/28/67
0202	Clean RM clothing Ref. MRR 0031	All items are dirty from normal use.		A	C	Approved 3/28/67
0203	P/N ME478-0027-0003 S/N 013100050016 "C" Band Transponder	Spacecraft Spare - was in warehouse at time of accident. Part to be returned to vendor and modified Ref. MCR A1943 Req. to support S/C 017.	None	A	C	

Revised: February 10, 1967

February 7, 1967

TO: Those Concerned

FROM: S. Beddingfield, KSC
J. M. Moore, NAA/FF

SUBJECT: Removal of Equipment and Facilities from Impounded Status

In accordance with the Accident Investigation Board's direction, the equipment and facilities noted herein may be released from Impounded Status in accordance with the procedures defined in this letter.

When the specified procedures for release from impoundment have been executed, a copy of the configuration records, where applicable, will be forwarded to Data Records for impoundment.

Each NAA and NASA-KSC supervisor of applicable equipment or areas involved will maintain the status of equipment or facilities released from impoundment and will be accountable to the Board for the proper and accurate execution for this plan.

This direction applies:

PLAN OF ACTION

PURPOSE: To delineate and delegate specific tasks to departments of NAA to accomplish compliance with, and completion of, certain conditions set forth in a letter from Prime Investigation Board governing the release from impound of selected groups of material and GSE/STE connected with Spacecraft 012.

LOGIC: Sequentially numbered, 1 through 15, under the heading "TASK", is a verbatim statement of the task as spelled out by the Prime Investigation Board.

Directly following the statement of task, under the heading "LOGIC", and numbered in steps, 1.1, etc., will be found specific instructions to individual departments within NAA.

Text follows:

I. TASK.

All GSE/STE and facility equipment on Launch Complex 34 which was not utilized for checkout or servicing of Spacecraft 012 will be released immediately.

LOGIC.

D/818 will provide to D/816 a list of above equipment signed by J. M. Moore. No TPS will be required.

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II. TASK.

All GSE/STE and facility equipment on Launch Complex 34 utilized prior to Plugs In and removed prior to Plugs In, but which is still in the Complex area, shall be statused in terms of configuration, copies made and retained in Room 3344, and then released for further use.

LOGIC.

- 2.1 D/818 will provide a list of all GSE/STE and facility equipment utilized on Launch Complex 34 prior to Plugs In and removed prior to Plugs In.
- 2.2 Configuration of the end item will be referenced to the exact configuration at the time of the incident. Copies of TPS's, DR's, and DRS's in the TAIR Book will be reproduced and stapled together with a cover sheet. The cover sheet will specify open work items at time of S/C 012 incident. This package will be placed in a special folder in the Acceptance Data Package.
- 2.3 Any deviations will require the initiation of a DR indicating discrepancies in detail.
- 2.4 D/816 will provide inspection coverage as required to verify all efforts involved in the above noted tasks.

III. TASK.

All GSE/STE and facility equipment on Launch Complex 34 utilized during Plugs In or later will require Board approval for release.

LOGIC.

- 3.1 All GSE/STE and facility equipment on Launch Complex 34 utilized during Plugs In or later will require an official letter from the Prime Investigation Board approving the release of all, or any part of, subject equipment. No TPS will be required.
- 3.2 Configuration will be established in accordance with the provisions outlined in paragraph 2.2 above.

IV. TASK.

All GSE/STE and facility equipment on Launch Complex 34 utilized in build-up prior to arrival at Launch Complex 34 of Spacecraft 012 shall be released immediately.

LOGIC.

- 4.1 D/818 shall submit a list to D/816, with copies to those concerned, indicating all GSE/STE and facility equipment indicated in Task IV above.

SUBJECT: Removal of Equipment and Facilities from Impounded Status
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- 4.2 Upon receipt and approval by D/816 of items called out in said list, such items will immediately be released for use.

V. TASK.

All GSE/STE and facility equipment outside of Launch Complex 34 utilized prior to arrival at Launch Complex 34 of Spacecraft 012 shall be checked for configuration status, per paragraph 2.2 above, and the fluids sampled for future records. These records will be impounded in Room 3344. Equipment may then be released.

LOGIC.

- 5.1 Task V. above requires the establishment of a configuration status, per paragraph 2.2 above.
- 5.2 D/819, under the surveillance of NAA and NASA QC, will take three fluid samples from each of the above noted items of GSE/STE and facility equipment which contain fluids. A Support Request will be initiated to obtain laboratory reports and such reports will be filed in the pertinent TAIR Book with a copy of said report impounded in Room 3344, MSOB. The following statement will be on the Support Request: "NAA and NASA Inspection Coverage Mandatory." Equipment may then be released.

VI. TASK.

All BME Equipment outside of Launch Complex 34 utilized on Spacecraft 012 hardware prior to completion of chamber run will be released for use. (Suit BME will remain under Board cognizance.)

LOGIC.

- 6.1 D/818 will prepare and submit a list to D/816 of all BME Equipment outside of Launch Complex 34 utilized on Spacecraft 012 hardware prior to the completion of the chamber run.
- 6.2 All Suit BME will be separately identified.
- 6.3 Upon verification of the list by D/816, all BME Equipment except that listed in paragraph 6.2 above will be immediately released.
- 6.4 All Suit BME (listed in paragraph 6.2 above) will not be released without written Board approval.
- 6.5 Above lists will identify equipment by model and serial number.

VII. TASK.

Spacecraft spares which were utilized in Spacecraft 012 shall stay impounded.

LOGIC.

- 7.1 D/816 will affix M59-B Withholding Tags to all spacecraft spares which were utilized in Spacecraft 012 and such spares will be impounded under the cognizance of D/816, and will not be released without written Board approval.

VIII. TASK.

Spacecraft spares which did not see Spacecraft 012 shall be dispositioned as follows:

- 8.1 Items of large quantity production (more than 50) - impound three of each lot and release the balance.
- 8.2 Small production items (less than 50) - impound one of each lot and release the balance.

LOGIC.

- 8.1 Release of all impounded items will be accomplished by written approval of the Board.

IX. TASK.

All GSE spares shall be released, except those utilized to service oxygen and water glycol.

LOGIC.

- 9.1 D/818 and D/810 will identify all GSE spares utilized to service oxygen and water glycol and will present a list of such items to D/816.
- 9.2 D/816 will affix an M59-B tag to such items and such items will be impounded in the NAA Warehouse, Building M7-505/KSC.
- 9.3 All GSE spares not included on list noted in paragraph 9.1 above will be released immediately.

X. TASK.

All non-flight hardware (non-GSE) not utilized after chamber test, will be released except for the communication equipment which will be controlled by the Board.

LOGIC.

- 10.1 D/818, together with D/810, will submit a list to D/816 identifying all non-flight hardware (non-GSE) not utilized after chamber test.

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- 10.2 Upon receipt of this list, D/816 will authorize the release of all such hardware except for communication equipment.
- 10.3 All communication equipment noted in list per Paragraph 10.1 above will have affixed to same an M59-B by D/816. This category of equipment will then be impounded until released by the Board in writing.

XI. TASK.

All non-flight hardware (non-GSE) utilized during chamber run shall be baselined in terms of configuration, copy of records impounded in Room 3344, and released for use (except the communication equipment which will be controlled by the Board).

LOGIC.

- 11.1 D/818, together with D/810, will prepare a list of all non-flight hardware (non-GSE) utilized during chamber run.
- 11.2 Configuration of such hardware shall be accomplished, per paragraph 2.2 above, by D/818 and recorded on applicable documents.
- 11.3 D/816 will provide inspection surveillance according to existing procedures.
- 11.4 D/818, together with D/810, will prepare a list of all communication equipment in this category.
- 11.5 D/816 will affix an M59-B tag to equipment noted in Paragraph 11.4 above and such equipment will be impounded under the control of D/816 pending official release by the Prime Investigation Board.

XII. TASK.

All laboratory supplies used on Spacecraft 012 shall be handled as follows:

LOGIC.

- 12.1 D/818 will prepare a list of all laboratory supplies used on Spacecraft 012 and shall indicate on said list adequate quantities necessary for laboratory analysis. If no remaining quantities exist, said list shall so indicate.
- 12.2 D/816 shall label and impound quantities noted above indicated for laboratory analysis.
- 12.3 D/818 will issue Support Requests as required to accomplish laboratory analyses on such quantities.

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12.4 All laboratory reports connected with Task XII will be submitted to and impounded by D/816.

12.5 After the impound of above noted quantities destined for laboratory analysis, all balances may be released for use.

XIII. TASK.

All new equipment whose equivalent has not been used on Spacecraft 012 but is now in areas which are controlled by the Board will be released for use.

LOGIC.

13.1 D/810 will formulate a list of all new equipment whose equivalent has not been used on Spacecraft 012.

13.2 All equipment indicated on said list noted in Paragraph 13.1 above will be immediately released.

XIV. TASK.

IMCC Houston not utilized but for monitoring shall be released.

LOGIC.

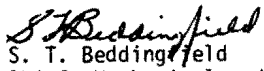
This item does not apply to the Florida Facility.

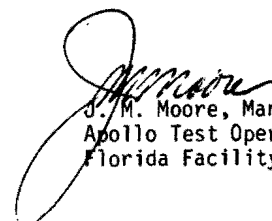
XV. TASK.

OCP's, Checklists, Schematics, etc., both flight and non-flight, being used by the crew at the time of the incident, shall be removed and stored in sealed boxes. Removal must be made under precise conditions, photographs taken to establish the condition of the books. Provide photographs where technically possible, showing the location and condition of these items as found. The only books to be removed are those over the couches.

LOGIC.

D/816 will verify in writing the accomplishment of all effort specified in Task XV above.


S. T. Beddingfield
Chief, Mechanical and Ordnance Branch
NASA-KSC


J. M. Moore, Manager
Apollo Test Operations
Florida Facility, NAA/S&ID

ENCLOSURE F-1